

Applicant: Anatoliy V. Tsyrganovich  
Serial No.: 10/820,237  
Filing Date: April 5, 2004  
Docket No.: ZIL-519-1C

### REMARKS

Reconsideration and allowance are respectfully requested.

Before entry of this amendment, claims 33-38, 40-41 and 43-54 were pending. In the Office Action, the claims 33-38, 40-41, 43-47 and 50-54 are rejected, and claims 48-49 are objected to. In the present amendment, claims 33-38, 40-41 and 43-54 are cancelled, and claims 55-74 are added.

In an office action dated December 12, 2005, the Examiner objected to claims 34-35, 38, 40-41 and 43-44 that were presented in an amendment dated October 29, 2005. The Examiner stated, "Claims 34, 35, 38, 40, 41, 43 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims" (Office Action dated December 12, 2005, page 6, lines 8-10). The Examiner rejected other claims as being anticipated by Haferl (USP 4,906,902). In an amendment dated January 2, 2005, Applicant cancelled all rejected claims and amended claims 33-34, 36-38, 40-41 and 43-44 to incorporate all of the limitations of the base claims.

Despite Applicants' cancellation and amendment of claims, the Examiner has now retracted the statement that claims 34, 35, 38, 40, 41, 43 and 44 would be allowable if rewritten in independent form. In the Office Action, the Examiner rejected claims 33-38, 40-41, 43-47 and 50-54 based on the same reference (Haferl) cited in the office action dated December 12, 2005. Therefore, Applicant takes this opportunity to distinguish Haferl. Applicant cancels all previously presented claims in this amendment and adds new claims that are similar to the claims previously presented with the amendment dated October 29, 2005.

#### I. Claims 33-38, 40-41 and 43-54

All previously pending claims 33-38, 40-41 and 43-54 have been cancelled.

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II. New claims 55-74

Applicant is adding new claims 55-74, which are similar to claims 25-44, respectively, presented with the amendment dated October 29, 2005.

A. Independent claims 55, 62 and 72

Haferl does not form the basis for a valid rejection under § 102(b) because Haferl does not disclose all of the limitations of any of claims 55, 62 or 72.

Specifically, Haferl does not disclose a correction signal with no discontinuities.

Claim 55 recites, "generating a correction signal with no discontinuities, wherein the correction signal has a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$  . . . , wherein the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ " (emphasis added). Claim 62 recites, "wherein the horizontal correction signal has no discontinuities, wherein the horizontal correction signal has a vertical active time  $t_{VA}$  and a vertical retrace time  $t_{VR}$ , and wherein the horizontal deflection current signal is not distorted after a transition from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ " (emphasis added). Claim 72 recites, "wherein the horizontal correction signal does not have any discontinuities" (emphasis added).

The Examiner refers to figure 1g and to figure 8c of Haferl as disclosing a correction signal that has no discontinuities. The Examiner stated in the office action dated December 20, 2005, with respect to claim 26 that Haferl discloses "that the correction signal has no discontinuities (as shown in figure 1 above, correction signal (v1, or Figure 1 element g) is continuous)" (office action dated December 20, 2005, page 3, lines 4-5). The "Figure 1 element g" to which the Examiner was referring is a reproduction of figure 8c of Haferl. The Examiner's figure 1 is reproduced below.

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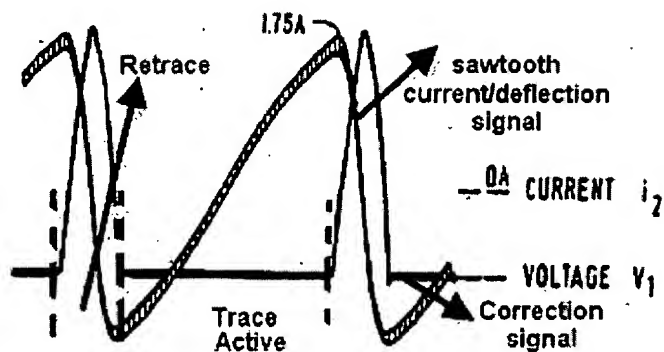
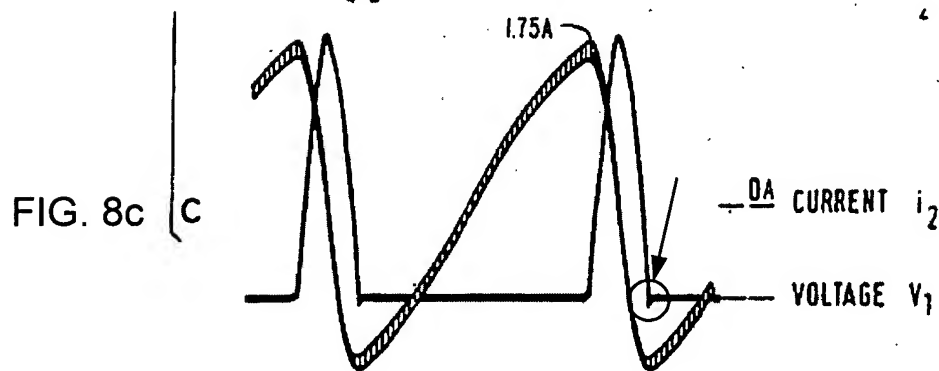
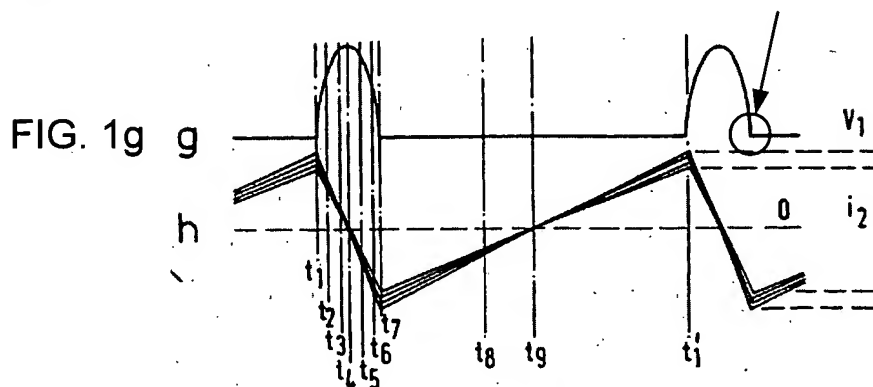


Figure 1

Figures 1g and 8c of Haferl are reproduced below.



Applicant respectfully disagrees that the signal labeled by the Examiner as "Correction signal v1" has no discontinuities. Moreover, Applicant also does not agree that figure 1g of Haferl shows a correction signal with no discontinuities. Applicant has circled the discontinuities in the signal labeled by the Examiner as "Correction signal v1" and in the signal of figure 1g. It is clear from the specification that the circled portions of the signals of Haferl are discontinuities.

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Figure 5 of the specification is reproduced below and shows an example of a discontinuity 514.

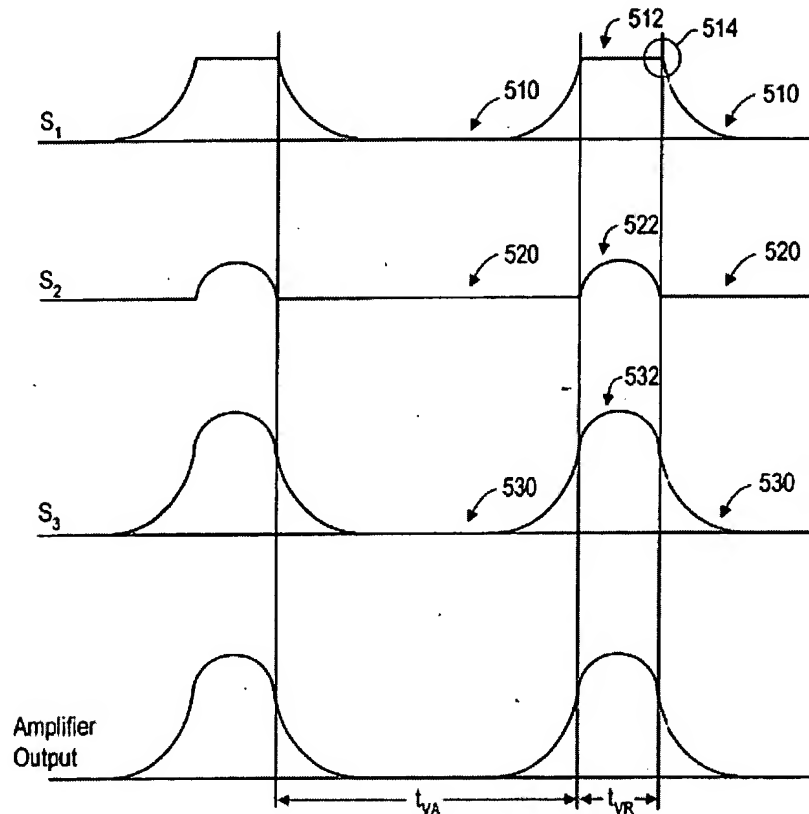


Fig. 5

The specification explains discontinuity 514 at paragraph [0038] as follows:

"[0038] As explained above, using first horizontal correction signal component  $S_1$  to modulate the amplitude of a horizontal sawtooth signal is undesirable since there is a discontinuity 514 between undefined portion 512 and parabolic portions 510. In particular, when first horizontal correction signal component  $S_1$  is amplified, discontinuity 514 causes the signal output from the amplifier to be distorted. As a result, horizontal deflection current signal  $I_H$  will be distorted resulting in an east-west geometry mismatch between the top and bottom of a raster display (as shown in FIG. 3C)." (emphasis added)

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Thus, even assuming that the signal  $V_1$  of figure 8c of Haferl is a correction signal, signal  $V_1$  has discontinuities.

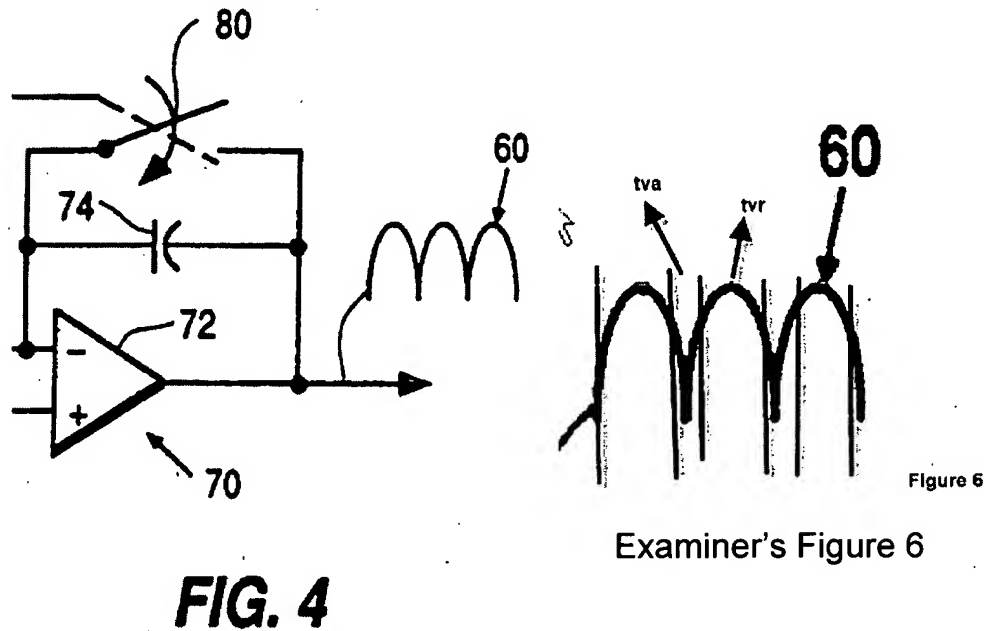
In addition, the Examiner's Figure 1 and figure 1g of Haferl do not disclose a correction signal with a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$  as recited in claim 55. The Examiner's Figure 1 and figure 1g of Haferl also do not disclose a horizontal correction signal with no discontinuities as recited in claims 62 and 72.

The Examiner added the words "Retrace" and "Trace Active" to figure 8c of Haferl. These periods do not, however, correspond to the vertical retrace time  $t_{VR}$  and the vertical active time  $t_{VA}$  as recited in the claims. The retrace period in the Examiner's figure 1 corresponds to the return of an electron beam after one line has been drawn on a raster display and before the next line is drawn. The vertical retrace time  $t_{VR}$ , however, corresponds to the time when the electron beam stops drawing the last line  $L_N$  at the bottom right of the screen to the time when the electron beam starts drawing the first line  $L_1$  at the top left of the screen. (Specification, paragraph [0010]) Thus, signal  $V_1$  of Haferl discloses neither a horizontal correction signal nor a signal with a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$ .

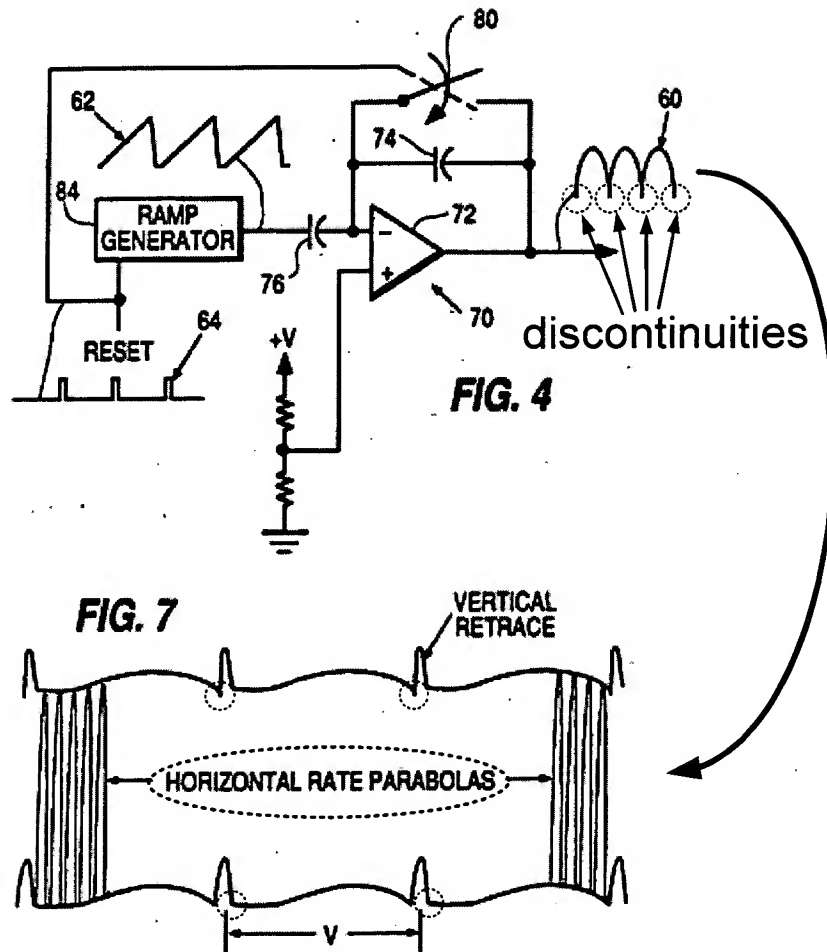
Fernsler (USP 5,034,664) also does not form the basis for a valid rejection under § 102(b) because Fernsler does not disclose all of the limitations of any of claims 55, 62 or 72. Specifically, Fernsler does not disclose a correction signal with no discontinuities. In addition, the Examiner does not point to a horizontal correction signal in Fernsler that has a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$ .

The Examiner states that Fernsler discloses "generating a correction signal (Figure 6, element 110), wherein the correction signal has a vertical retrace  $t_{vr}$  and a vertical active time  $t_{va}$  (as shown in figure 6 below)" (Office Action, page 5, lines 14-16). Applicant respectfully disagrees. Signal 60 of Fernsler discloses neither a signal with no discontinuities, nor a signal with a vertical retrace  $t_{VR}$  and a vertical active time  $t_{VA}$ . The figure 6 cited by the

Examiner is not figure 6 of Fernsler but rather a portion of figure 4 of Fernsler to which the Examiner has added subject matter that is inconsistent with the disclosure of Fernsler. The Examiner's figure 6 and a portion of figure 4 of Fernsler are reproduced below.



The vertical retrace time and the vertical active time designations added by the Examiner are not disclosed by Fernsler. Instead, Fernsler suggests, and figure 7 of Fernsler shows, that the pulses of signal 60 occur only during the vertical active time  $t_{VA}$ . Fernsler states, "the parabola is initialized to zero amplitude as of a point in time defined by the retrace pulse . . ." (Fernsler, col. 9, lines 33-35). Fernsler states that "a parabola 60 at the horizontal rate is obtained at the output of operational amplifier U1" (Fernsler, col. 8, lines 56-57) (emphasis added). Figure 7 shows the horizontal rate parabolas and shows no pulses of the parabolas during a vertical retrace. Finally, figure 7 of Fernsler also shows that the vertical pulses of Fernsler are discontinuous. The vertical pulses even have leading edges. Fernsler explains, "the first and auxiliary resetting circuits are responsive to horizontal retrace pulses, for example the leading edges of the horizontal retrace pulses" (Fernsler, col. 4, lines 48-49) (emphasis added).



Therefore, parabola 60 of Fernsler is not a horizontal correction signal with a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$ . In addition, parabola 60 has many discontinuities, which Applicant has circled in figure 4 of Fernsler above. Applicant has also circled the discontinuities in the vertical retrace pulses of Fernsler.

Because neither Haferl nor Fernsler discloses all of the elements of claims 55, 62 and 72, neither Haferl nor Fernsler forms the basis for a valid § 102(b) rejection. Allowance of claims 55, 62 or 72 is requested.

#### B. Dependent claims 56-61 and 69-71

Claims 56-61 and 69-71 depend directly or indirectly from claim 55 and are allowable for at least the same reasons for which claim 55 is allowable.

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Allowance of claims 56-61 and 69-71 is requested.

C. Dependent claims 63-68

Claims 63-68 depend directly or indirectly from claim 62 and are allowable for at least the same reasons for which claim 62 is allowable. Allowance of claims 63-68 is requested.

D. Dependent claims 73-74

Claims 73-74 depend from claim 72 and are allowable for at least the same reasons for which claim 72 is allowable. Allowance of claims 73-74 is requested.

III. Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully submits that the entire application is in condition for allowance. A Notice of Allowance is respectfully requested. The Examiner may contact the undersigned at (925) 621-2121 to discuss any aspect of this application.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By   
Darien K. Wallace

Date of Deposit: May 5, 2006

Respectfully submitted,



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